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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/896,321 | 06/29/2001 | Preston J. Hunt | 42390P11147 | 8383 |

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EXAMINER

POLTORAK, PIOTR

ART UNIT PAPER NUMBER

2134

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|--|---|---|--|
| <p align="center">Office Action Summary</p> | <p>Application No.</p> <p>09/896,321</p> | <p>Applicant(s)</p> <p>HUNT ET AL.</p> | |
| | <p>Examiner</p> <p>Peter Poltorak</p> | <p>Art Unit</p> <p>2134</p> | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/21/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-14, 20-23 and 25-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-14, 20-23 and 25-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| <p>1) <input type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</p> <p>6) <input type="checkbox"/> Other: _____.</p> |
|--|---|

DETAILED ACTION

1. The Amendment, and remarks therein, received on 3/21/2005 have been entered and carefully considered.
2. The Amendment cancels claims 5, 15-19 and 24.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

Response to Amendment

4. Applicant's arguments are directed towards the newly introduced limitation: "marking those contents of the client that did not match the contents of the repository for later copying to the repository". The limitation is addressed in the current Office Action below.
5. Claims 1-4, 6-14, 20-23, 25-28 have been examined.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 6-8, 10-13, 20-23 and 25-27 are rejected under 35 U.S.C. 103(a) as obvious over *Margolus et al.* (U.S. Pub. No. 20040143743).

7. As per claims 1 and 6 *Margolus et al.* teach a cryptographic hash function calculated from the data-item generating DATANAME 3a (*digital fingerprint, Fig. 1 and [59]*).

This reads on: "generating a message digests on a client wherein said message digests uniquely identify contents of files stored on the client".

8. *Margolus et al.* teach depositing data into the repository, wherein DATANAME 3a is first used to checked against repository hash table (*Fig. 1 and [60]*).

This reads on: "synchronizing contents of said client with a repository connected with the network based on contents of the message digests on the client and corresponding entries in a database of message digests stored on the repository".

9. Furthermore, *Margolus et al.* teach that the repository independently recomputes the DATANAME 3a in order to verify correct transmission *[60]*.

This reads on "verifying that the contents of the repository match the contents of the client".

10. *Margolus et al.* teach a back up of the local file system *[54]*. In addition to implement a message digests *[59]* *Margolus et al.*'s discloses that using message digests uploading content that is already present even if associated with a different file name *[7]* and that when two message digests don't match, then the files are different *[6]*.

Based on this teaching one of ordinary skill in the art would anticipate that the content that does not match the content of the repository is copied to the repository in *Margolus et al.*'s.

11. Furthermore, even if *Margolus et al.* did not implement this feature it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to

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copy to repository those contents of the clients that did not match the content of the repository. One of ordinary skill in the art would have been motivated to perform such a modification in order to conserve storage space by not storing duplicate data [7].

12. As per the limitation: "marking those contents of the client that did not match the contents of the repository for later copying to the repository" *Margolus et al.* teaches that a data item may be represented as a composite of objects, and the component objects may be separately deposited in the repository [110-111].

It is clear that in order to ensure that all the pieces of a composite object are copied into the repository (even though they are separately deposited) must be marked to reflecting the fact that they are part of the composite object and that they are to be copied.

13. Also, in situations where multiple files are compared it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to configure the client system to mark the content on the client that was found not to match the repository content in order to prevent the match test repetition.

14. Also, in [28] it is taught that a plurality of clients are connected to a network store data in the repository. In multi node network environment it is likely that a client attempts to initiate data transfer to the repository and that the repository can not accept the requests (*e.g. bandwidth limit, client licenses, no available ports, equipment malfunction, etc.*)

Thus, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to mark an object that is selected for copying to the repository. One of ordinary skill in the art would have been motivated to perform such a modification in order to ensure that the data that could not be accepted by the repository at the time of the request could be copied as soon as the repository was ready to accept it.

Furthermore, it is old and well-known practice to mark content (e.g. files) for future actions that is performed on the content (*see U.S. Patent No. 6434621, or Windows 2000 (Task Scheduler) for example*). One of ordinary skill in the art at the time of applicant's invention would have been motivated to marking content for future actions that is performed on the content (e.g. later copying to the repository) in order to provide flexibility when the action is performed.

15. As per claims 2 and 3 *Margolus et al.* teach a back up of the local file system [54] and disclose that to deposit a data-item into the repository the DATANAME 3a is first used to check whether or not the repository already contains a copy of the data-item.
16. As per claim 4 the local file system client can choose data to deposit into the repository [59].
17. As per claim 7 *Margolus et al.* teach SHA-1 [59].
18. As per claim 8 *Margolus et al.* Fig. 1 and [60] read on updating the message digest on the repository by copying the message digest from the client to the database on the repository.

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19. Claims 20-23 and 25-27 are substantially equivalent to claims 1-4 and 6-8; therefore claims 20-23 and 25-27 are similarly rejected.
20. Claims 10-13 are substantially equivalent to claims 1, 3 and 6-8; therefore claims 10-13 are similarly rejected.
21. Claims 9, 14 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Margolus et al.* (U.S. Pub. No. 20040143743) in view of *Cox et al.* (U.S. Patent No. 6438724).
22. *Margolus et al.* teach verifying that the contents of the repository match the contents of the client as discussed above. Furthermore *Margolus et al.* explicitly teach that the process of verification is applied to a data-item in order to avoid any danger of associating the wrong dataname with a given repository data-item [60]. *Margolus et al.* do not explicitly teach repeating client and repository synchronization if the error is found (if first and second cryptographic hashes do not match). *Cox et al.* teach re-sending data if an error is detected (*Cox et al.*, col. 1 lines 23-25). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to repeat client and repository synchronization if first and second cryptographic hashes do not match as taught by *Cox et al.* One of ordinary skill in the art would have been motivated to perform such a modification in order to ensure data *integrity* (*Cox et al.*, col. 1 lines 23-25).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Poltorak whose telephone number is


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(571) 272-3840. The examiner can normally be reached Monday through Thursday from 9:00 a.m. to 4:00 p.m. and alternate Fridays from 9:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on (571) 272-3838. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


11/22/05


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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2134